APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,645	08/21/2003	J. Patrick Thompson	MSFT-1752/302730.01	9793

			EXAMINER
41505	7590	10/03/2006	RADTKE, MARK A

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ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *20 January 2006*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-30* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *21 August 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *1/20/06, 5/31/05, 2/9/04*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1.   Document number 2004/024795 A1, cited on the IDS received 20 January 2006,

has not been considered because no U.S. Pre-Grant Publication with that number was

found. Examiner notes the existence of JPO and WIPO publications with the same

number, but the instant IDS cites a U.S. application with a different inventor than those

foreign publications. If Applicant would like the reference considered, Examiner

respectfully requests that an application number corresponding to the above document

number be provided in Applicant's response.

Double Patenting

2.   Claims 1, 11 and 21 of this application conflict with claims 68, 1 and 51,

respectively, of Application No. 10/646,941. 37 CFR 1.78(b) provides that when two or

more applications filed by the same applicant contain conflicting claims, elimination of

such claims from all but one application may be required in the absence of good and

sufficient reason for their retention during pendency in more than one application.

Applicant is required to either cancel the conflicting claims from all but one application

or maintain a clear line of demarcation between the applications. See MPEP § 822.

3.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4.   Claims 1, 11 and 21 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 68, 1 and 51,

respectively, of copending Application No. 10/646,941. Although the conflicting claims

are not identical, they are not patentably distinct from each other because they both

claim Items and Relationships that connect them.

This is a <u>provisional</u> obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claims 4-9, 14-19 and 24-29 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

7.   Claims 4, 14 and 24 recite the limitation "said Relationship's target item" in line 2.

There is insufficient antecedent basis for this limitation in the claim. First, "said

Relationship's" lacks antecedent basis because the antecedent of Relationship is "each

Relationship" of "a plurality of Relationships". Either a specific and unambiguous

Relationship must be identified, or "Relationship's" should be changed to --

Relationships'--. Second, the entire phrase ("said Relationship's target item") lacks

antecedent basis because there is no previous mention or definition of "target Item". A

reasonable interpretation of "target Item" would be "Items in a Relationship", but

Relationships (as defined in claim 2) would have two "target Items". There are

numerous other ways to parse "said Relationship's target Item". Examiner suggests

defining the "(Target)" property without using the word "target".

8.   Claims 5, 15 and 25 recite the limitation "the ownership" in line 2. There is

insufficient antecedent basis for this limitation in the claim. Preceding claims make no

mention of "ownership" and ownership is not inherent in a Relationship. For instance,

two objects may implement the same interface, and thus belong in a Relationship

without either one owning the other.

9.   Claims 8, 18 and 28 recite the limitation "Item type" in line 2. There is insufficient

antecedent basis for this limitation in the claim. Preceding claims make no mention of

"Item type" and type is not inherent to an Item.

10.   Claims 9, 19 and 29 recite the limitation "parent Item type" in lines 2-3. There is

insufficient antecedent basis for this limitation in the claim. Preceding claims make no

mention of "Item type" and type is not inherent to an Item. Similarly, parents are not

inherent to Items. See Examiner's comments regarding claim 8.

11.   Claims 6-9, 16-19 and 26-29 are rejected for being indefinite. There are two

conflicting ways to parse the language of each claim. For instance, a portion of claim 6

could be read as "establishes a Relationship (between each pair of Items) having a ·

common value for a common property" or "establishes a Relationship (between each

pair of Items having a common value for a common property)". That is, it is unclear

whether the phrase starting with "having" is intended to modify the automatically

established Relationship (i.e., "automatically establishes a Relationship with a common

value for a common property") or whether the phrase is a condition for establishing a ·

Relationship (i.e., "automatically establishes a Relationship when two Items have the

same value for the same property"). Similar ambiguities can be found in the other

above-mentioned claims. For the purposes of examination, these claims will be

interpreted as "automatically establishes a Relationship with a common value for a

common property", because "properties" are claimed as part of Relationships (see claim

3).

Claim Rejections - 35 USC § 101

12.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13.   Claims 1-30 are rejected under 35 U.S.C. 101 because they recite

interconnecting Items with Relationships and managing said Relationships, which

presents an "abstract idea" which does not necessarily require a technology. A claim

must not be directed merely to an abstract idea, but must instead be tied to a computer,

environment, or machine, which would result in a practical application producing a

concrete, useful and tangible result. "Items" having "Relationships", "owners" and

"targets" are basic elements of the thought process and so are abstract *per se*. The

preamble of the claims may recite a tangible embodiment ("hardware/software interface

system"), but the preamble is considered an indication of intended use and is not given

patentable weight. The steps of the claim do not functionally require a physical

embodiment and "managing said Relationships" does not functionally relate to a

"hardware/software interface system level".

14.   The Items are not connected in a deterministically defined way, thus the claims

lack concreteness. Items may be "interconnected" and "managed" in any number of

ways; performing the steps of the process multiple times will produce different results.

"Managing" Relationships has no stated, implied or well-known usefulness, thus the

claims lack utility. A managed Relationship requires no tangible embodiment and is not

a tangible result, thus the claims lack a tangible embodiment. Typical tangible results

include "storing" or "displaying" a result. "Interconnecting" and "managing" are not

concrete, useful or tangible results.

Claim Rejections - 35 USC § 102

15.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16.   Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by

Bernstein et al. ("The Microsoft Repository", Proceedings of the 23rd VLDB Conference,

1997, available online at http://citeseer.ist.psu.edu/bernstein97microsoft.html).

        As to claim 1, Bernstein et al. teaches a method for manipulating a plurality of

discrete units of information ("Items") in a hardware/software interface system for a

computer system (see Abstract), said method comprising interconnecting said Items

(see page 6, left column, bullet 2, Repository Object) with a plurality of Relationships

(see page 6, left column, bullet 4, Relationship Object, "represents a connection") and

managing said Relationships at the hardware/software interface system level (see page 7, left column, final paragraph, final sentence, "the repository supports [...] configuration management").

As to claims 2, 12 and 22, Bernstein et al. teaches wherein each Relationship from among said plurality of Relationships constitutes, at the hardware/software interface system level, a mapping between a pair of Items that said Relationship interconnects (see page 6, left column, bullet 4, Relationship Object, "represents a connection between **two** repository objects", emph. added).

As to claims 3, 13 and 23, Bernstein et al. teaches wherein each Relationship has properties (see page 6, left column, bullet 4, Relationship Object, "A relationship can have properties")..

As to claims 4, 14 and 24, Bernstein et al. teaches wherein each Relationship comprises a property (Target) for the identification of said Relationship's target Item (see page 8, left column, section "Relationship Objects", paragraph 3, line 5, "The repository object [...] you traverse to is called the target" and see figure 4).

As to claims 5, 15 and 25, Bernstein et al. teaches wherein each Relationship further comprises a property (IsOwned) for the ownership of said Relationship's target

Item (see page 6, figure 2, "Owner" and see page 11, section 5, paragraph 2, line 6,
"Owner").

As to claims 6, 16 and 26, Bernstein et al. teaches wherein the
hardware/software interface system automatically establishes a Relationship between
each pair of Items having a common value for a common property (See page 8, right
column, paragraphs 2-3 and see figure 5. "IrepositoryObject assigns the same name to
that Name property and to all naming relationships to that object." Using named
relationships, each Relationship established will have a common value ("the same
name") for a common property (Name)).

As to claims 7, 17 and 27, Bernstein et al. teaches wherein the
hardware/software interface system automatically establishes a Relationship between
each pair of Items having a common property (See page 5, left column, section 2.2,
paragraph 3 and see pages 7-8, spanning paragraph. Properties are inherited from
Interfaces to Repository Objects).

As to claims 8, 18 and 28, Bernstein et al. teaches wherein the
hardware/software interface system automatically establishes a Relationship between
each pair of Items having the same Item type (See figure 2. IProject and IProjectItem
are related and both contain Projects).

As to claims 9, 19 and 29, <u>Bernstein et al.</u> teaches wherein the hardware/software interface system automatically establishes a Relationship between each pair of Items having a common parent Item type (See pages 7-8, section 3.3, particularly paragraph 3. The class hierarchy establishes Relationships between siblings).

As to claims 10, 20 and 30, <u>Bernstein et al.</u> teaches wherein the hardware/software interface system automatically establishes a Relationship between each pair of Items based on a user-defined parameter (see page 9, left column, section "Support for IUnknown", line 4, "custom interfaces").

As to claim 11, <u>Bernstein et al.</u> teaches a computer-readable medium with computer-readable instructions for a hardware/software interface system for a computer system (see Abstract),

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 21, <u>Bernstein et al.</u> teaches a hardware/software interface system, for use in a computer system (see Abstract),

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

Additional References

17.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

The following patents are cited to further show the state of art with respect to

object/relation mapping in general:

Document No.	Inventor
US 7043481 B2	Mullins; Ward et al.
US 5842213 A	Odom; Paul S. et al.
US 6851089 B1	Erickson; Stephan et al.
US 6643652 B2	Helgeson; Christopher S. et al.
US 6199195 B1	Goodwin; Richard Glenn et al.
US 6999956 B2	Mullins; Ward

"Using Value Objects", by the XDoclet Team. Last published: 05 May 2005. Available
online at http://xdoclet.sourceforge.net/xdoclet/valueobjects.html
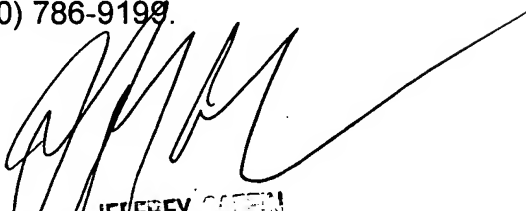
Conclusion

18.   Any inquiry concerning this communication or earlier communications should be

directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571)

272-7163, and the examiner can normally be reached between 9 AM and 5 PM,

Monday through Friday. If attempts to contact the examiner are unsuccessful, the

examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to Customer Service at (800) 786-9199.

maxr
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28 September 2006

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100